

REMARKS/ARGUMENTS

35 USC § 103

The rejection of **Claims 1-15** under 35 USC § 103 as being obvious over Bradbury et al. (U.S. Pat. No. 5,306,400) in view of Velin et al. (WO02/40406) was maintained by the office for the same reasons as provided in the earlier office action of June 21, 2010.

The Applicant respectfully disagrees, especially in view of the amendments herein. Also, the applicant reiterates his position from the earlier reply of September 21, 2010. The arguments made therein are incorporated here by reference. In addition, applicant further amended the claims to even more clearly delineate the subject matter of the present application over the cited art.

As amended herein, claim 1 expressly requires a step of "*...eluting an ion exchange column to which nitrate is bound with an eluent that includes a metal halide to thereby form a solution comprising the nitrate and the metal halide...*", a step of "*...using the solution comprising the metal halide from step (III) as a regenerated eluent in a subsequent elution of nitrate from the ion exchange resin to thereby produce a loaded regenerated eluent comprising the nitrate and the metal halide...*" and a step of "*...subjecting the loaded regenerated eluent to steps (I)-(III)...*" Such steps are neither expressly nor inherently taught by Bradbury et al.

Similarly, amended claim 9 recites a step of "*...using the regenerated metal halide eluent in a subsequent elution of the anion exchange resin...*" Once more, such steps are neither expressly nor inherently taught by Bradbury et al.

(I) In addition to the prior arguments, it should be appreciated that the present claims require production of a loaded eluate that includes both the nitrate and the metal halide, that the loaded eluate is being electrochemically treated to form a regenerated eluate, and that the so regenerated eluate is then used in a subsequent elution process to generate more loaded eluate. Viewed from a different perspective, the electrochemical process is used to recycle the eluate.

In contrast, Bradbury transfers nitrate from a resin into a brine that is then fed into the central anion compartment and anion resin in the device. Thus, the anion resin in the device

is used to regenerate the brine and not the electrochemical process as instantly claimed. In other words, the reduction and oxidation processes in Bradbury are performed on the nitrate in the electrolyte in the cathode and anode compartments, while the remainder of the regenerate leaves the device as regenerated eluant. Such is entirely inconsistent with the claimed process where the totality of the eluent (*i.e.*, without any separation of components) is electrochemically treated and then re-used as regenerated eluent.

(2) Regarding Velin et al. , the office stated that

"... Graphite is a type of carbon. The shape of the graphite, *i.e.*, shaped into a "felt" is given little or no patentable weight in a method recitation ..."

It appears as though the office failed to acknowledge the substantial differences between carbon felt and graphite. Once more, it is pointed out that graphite is a highly ordered, crystalline allotrope of carbon, whereas carbon felt is a disordered non-crystalline pyrolysis product from polyacrylonitrile. Graphite electrodes contains carbon almost exclusively in the sp^2 hybridization and are thus significantly less susceptible to oxidation as compared to carbon felt electrodes that have a high surface area and significant content of sp^3 hybridized carbon. The person of ordinary skill in the art would therefore not have chosen carbon felt as electrode material.

REQUEST FOR ALLOWANCE

Claims 1 and 4-15 are pending in this application. The applicant requests allowance of all pending claims.

Respectfully submitted,
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